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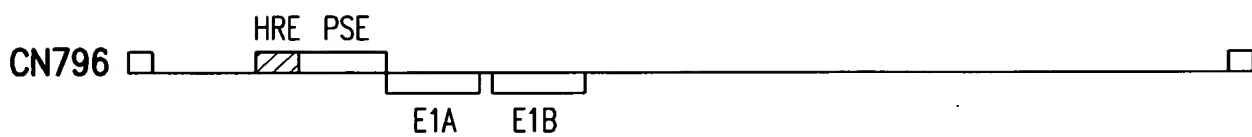


FIG.1



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gggccccaaa ttagcaagt accacgtggt tctgaagcca gtggcctaag gaccaccctt 61  
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atgagttagg gaatgaatga gtccaagcag atgctatacg ttggctgttg gagattttgg 781  
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cctcgccgag gcctgccgc atgggccccg gccgcgcgcg ccgcctgtca ccggggccgc 1501  
gcggggccgtg agcgtcatg

FIG.2



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ccgatatcca gagatttttt ggggggctcc atcacacaga catgttgact gtcttcattg 480  
ttgactttta gtatccagcc cctctagaaa tctagctgat atagtgtggc tcaaaaacct 540  
cagcaciaat cacaccgtta gactatctgg tgtggcccaa accttcaggt gaacaaaggg 600  
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tctctgatga agatattatc ttcattgatc tggattgaaa acagacctac tctggaggaa 1680

FIG.3A



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aagacacaca gatacgtgac agaaccatgg agaattgcct cccaacgctg ttcagccaga 1920  
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FIG.3B



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FIG.3C



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ccccagcccc aagctt 5836

FIG.3D



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FIG.4A



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atccagcccc	cagagccacc	tctgtcacct	tctgtctggg	catcatccca	ccttcacaag	1740
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FIG.4B





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caatggattg acaacatcaa gagttggaac aagtggacat ggagatgtta cttgtggaaa 3840  
tttagatgtg ttcagctatc gggcaggaga atctgtgtca aattccagca tggttcagaa 3900  
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FIG.4C



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ccgggctcca acctcagagc ccgcattgga ggagccagca ctctaggcct ttcctagggt	5460
gactctgagg ggacctgac acgacaggat cgctgaatgc acccgagatg aaggggccac	5520
cacgggaccc tgctctcgtg gcagatcagg agagagtggg acaccatgcc agggcccat	5580
ggcatggctg cgactgaccc aggcactcc cctgcatgca tcagcctcgg taagtacat	5640
gaccaagccc aggaccaatg tggaaggaag gaaacagcat cccctttagt gatggaaccc	5700
aaggctcagtg caaagagagg ccatgagcag ttaggaaggg tggccaacc tacagcaca	5760
accatcatct atcataagta gaagccctgc tccatgaccc ctgcatttaa ataaacgtt	5820
gttaaattgag tcaaattccc tcacatgag agctcacctg tgtgtaggcc catcacacac	5880
acaaacacac acacacacac acacacacac acacacacac acagggaaag tgcaggatcc	5940
tggacagcac caggcaggct tcacaggcag agcaaacagc gtgaatgacc catgcagtgc	6000
cctgggcccc atcagctcag agaccctgtg agggctgaga tggggctagg caggggagag	6060
acttagagag ggtggggcct ccaggagggg ggctgcaggg agctgggtac tgccctccag	6120
ggagggggct gcaggagct gggtactgcc ctccaggag ggggctgcag ggagctgggt	6180
actgccctcc agggaggggg ctgcaggag ctgggtactg ccctccaggg agggggctgc	6240
agggagctgg gtactgccct ccaggaggc agggagactg ttcccaacag agagcacatc	6300
ttctgcagc agctgcacag acacaggagc cccatgact gccctgggccc aggggtgtga	6360
ttccaaattt cgtgccccat tgggtgggac ggaggttgac cgtgacatcc aaggggcatc	6420
tgtgattcca aacttaaact actgtgcta caaaatagga aataacccta ctttttctac	6480
tatctcaaat tccctaagca caagctagca ccctttaaat caggaagttc agtcaactct	6540
ggggtcctcc catgccccca gtctgacttg caggtgcaca ggggtggctga catctgtcct	6600
tgctcctcct cttggctcaa ctgccgcccc tccctgggggt gactgatggg caggacaagg	6660
gactctagag ctggcccat gattgacagg aaggcaggac ttggcctcca ttctgaagac	6720
taggggtgtc aagagagctg ggcattccac agagctgcac aagatgacgc ggacagaggg	6780

FIG.4D



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tgacacaggg	ctcagggctt	cagacgggtc	gggagggctca	gctgagagtt	cagggacaga	6840
cctgaggagc	ctcagtggga	aaagaagcac	tgaagtggga	agttctggaa	tgttctggac	6900
aagcctgagt	gctctaagga	aatgctccca	ccccgatgta	gcctgcagca	ctggacggtc	6960
tgtgtacctc	cccgtgccc	atcctctcac	agccccgcc	tctagggaca	caactcctgc	7020
cctaacatgc	atctttcctg	tctcattcca	cacaaaagg	cctctggggt	ccctgttctg	7080
cattgcaagg	agtggaggtc	acgttcccac	agaccacca	gcaacagggt	cctatggagg	7140
tgcggtcagg	aggatcacac	gtcccccat	gccagggga	ctgactctgg	gggtgatgga	7200
ttggcctgga	ggccactggt	cccctctgtc	cctgagggga	atctgcaccc	tggaggctgc	7260
cacatccctc	ctgattcttt	cagctgaggg	cccttcttga	aatcccagg	aggactcaac	7320
ccccactggg	aaaggccag	tgtggacggt	tccacagcag	cccagctaag	gcccttggac	7380
acagatcctg	agtgagagaa	cctttaggg	cacaggtgca	cgccatgtc	cccagtgcc	7440
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ccccaatgac	gtgaccctg	gggtggctcc	aggtctccag	tccatgccac	caaaatctcc	7560
agattgaggg	tcctcccttg	agtcctgat	gcctgtccag	gagctgcccc	ctgagcaa	7620
ctagagtgca	gagggctggg	attgtggcag	taaaagcagc	cacatttgte	tcaggaagga	7680
aagggaggac	atgagctcca	ggaagggcga	tggcgtcctc	tagtgggcgc	ctcctgttaa	7740
tgagcaaaaa	ggggccagga	gagttgagag	atcagggctg	gccttggact	aaggctcaga	7800
tggagaggac	tgaggtgcaa	agagggggct	gaagtagggg	agtggtcggg	agagatggga	7860
ggagcaggta	aggggaagcc	ccagggaggc	cgggggaggg	tacagcagag	ctctccactc	7920
ctcagcattg	acatttgagg	tggctgtgct	agtgggggtc	tgtaaattgt	aggggtgtca	7980
gcaccatctg	gggactctac	ccactaaatg	ccagcaggac	tcctcccca	agctctaaca	8040
accaacaatg	tctccagact	ttccaaatgt	cccctggaga	gcaaaattgc	ttctggcaga	8100
atcactgac	tacgtcagtc	tctaaaagt	actcatcagc	gaaatccttc	acctcttggg	8160
agaagaatca	caagtgtgag	aggggtagaa	actgcagact	tcaaaatctt	tccaaaagag	8220
ttttacttaa	tcagcagttt	gatgtcccag	gagaagatac	atttagagtg	tttagagttg	8280
atgccacatg	gctgcctgta	cctcacagca	ggagcagagt	gggttttcca	agggcctgta	8340
accacaactg	gaatgacact	cactgggtta	cattacaaag	tggaatgtgg	ggaattctgt	8400
agactttggg	aagggaaatg	tatgacgtga	gccacagcc	taaggcagtg	gacagtccac	8460
tttgaggctc	tcaccatcta	ggagacatct	cagccatgaa	catagccaca	tctgtcatta	8520

FIG.4E



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gaaaacatgt	tttattaaga	ggaaaaatct	aggctagaag	tgctttatgc	tcttttttct	8580
ctttatgttc	aaattcatat	acttttagat	cattccttaa	agaagaatct	atccccctaa	8640
gtaaatgtta	tcaactgactg	gatagtgttg	gtgtctcact	cccaaccctt	gtgtggtgac	8700
agtgccttgc	ttccccagcc	ctgggcccctc	tctgattcct	gagagctttg	ggtgctcctt	8760
cattaggagg	aagagaggaa	gggtgttttt	aatattctca	ccattcacc	atccacctct	8820
tagacactgg	gaagaalcag	ttgccactc	ttggatttga	tcctcgaatt	aatgacctct	8880
attttctgtcc	cttgctccatt	tcaacaatgt	gacaggccta	agaggtgcct	tctccatgtg	8940
atTTTTgagg	agaaggttct	caagataagt	tttctcacac	ctctttgaat	tacctccacc	9000
tgtgtcccca	tcaccattac	cagcagcatt	tggacccttt	ttctgttagt	cagatgcttt	9060
ccacctcttg	agggtgtata	ctgtatgctc	tctacacagg	aatatgcaga	ggaaatagaa	9120
aaagggaaat	cgcattacta	ttcagagaga	agaagacctt	tatgtgaatg	aatgagagtc	9180
taaaatccta	agagagccca	tataaaatta	ttaccagtgc	taaaactaca	aaagttacac	9240
taacagtaaa	ctagaataat	aaaacatgca	tcacagttgc	tggtaaagct	aaatcagata	9300
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caatatgctg	cctgtaattt	ttgttccctg	gcagaatgta	ttgtcttttc	tccctttaa	9420
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ccagccccac	gaagagcaga	ggcctgagct	tccttggtca	aaataggggg	ctagggagct	9540
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ctggagggtg	gtgagcctca	ctggtggcct	gatgcttacc	ttgtgccctc	acaccagtgg	9660
tcaactggaac	cttgaacact	tggtctgtcg	ccgatctgc	agatgtcaag	aacttctgga	9720
agtcaaatta	ctgcccactt	ctccagggca	gatacctgtg	aacatccaaa	accatgccac	9780
agaaccctgc	ctgggggtcta	caacacatat	ggactgtgag	caccaagtcc	agccctgaat	9840
ctgtgaccac	ctgccaaagt	gcccctaact	gggatccacc	aatcactgca	catggcaggc	9900
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cctggtagtg	gtgaggagcc	ttgggaccct	caggattact	ccccttaagc	atagtgggga	10020
cccttctgca	tccccagcag	gtgccccgct	cttcagagcc	tctctctctg	aggtttaccc	10080
agacccttgc	accaatgaga	ccatgctgaa	gcctcagaga	gagagatgga	gctttgacca	10140
ggagccgctc	ttccttgagg	gccagggcag	ggaaagcagg	aggcagcacc	aggagtggga	10200

FIG.4F



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acaccagtgt ctaagcccct gatgagaaca ggggtggtctc tcccatatgc ccataccagg 10260  
cctgtgaaca gaatcctcct tctgcagtga caatgtctga gaggacgaca tgtttccag 10320  
cctaacgtgc agccatgccc atctaccac tgcctactgc aggacagcac caaccaggga 10380  
gctgggaagc tgggagaaga catggaatac ccatggcttc tcaccttctc ccagtccagt 10440  
gggcaccatt tatgcctagg acaccacct gccggccca ggctcttaag agttaggtca 10500  
cctaggtgcc tctgggaggc cgaggcagga gaattgcttg aaccgggag gcagaggttg 10560  
cagtgagccg agatcacacc actgcactcc agcctgggtg acagaatgag actctgtctc 10620  
aaaaaaaaag agaaagatag catcagtggc taccaagggc taggggcagg ggaagggtga 10680  
gagttaatga ttaatagtat gaagtttcta tgtgagatga tgaaaatgtt ctggaaaaaa 10740  
aaatatagtg gtgaggatgt agaataattg gaatataatt aacggcattt aattgtacac 10800  
ttaacatgat taatgtggca tattttatct tatgtatttg actacatcca agaaacactg 10860  
ggagagggaa agcccaccat gtaaaataca cccaccctaa tcagatagtc ctcattgtac 10920  
ccaggtacag gccctcatg acctgcacag gaataactaa ggatttaagg acatgaggct 10980  
tcccagccaa ctgcaggtgc acaacataaa tgtatctgca aacagactga gagtaaagct 11040  
gggggcacaa acctcagcac tgccaggaca cacacccttc tcgtggatte tgactttatc 11100  
tgaccgggcc cactgtccag atcttgttgt gggattggga caaggagggt cataaagcct 11160  
gtccccaggg cactctgtgt gagcacacga gacctccca cccccacc gttaggtctc 11220  
cacacataga tctgaccatt aggcatgtg aggaggactc tagcgcgggc tcagggatca 11280  
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gcagggttcc tgcagtccac aggtccagct caccctgggtg taggtgcccc atccccctga 11400  
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cctcactcaa gctgtccaga gagggcagca ccttgagacag cgcccacccc acttcactct 11520  
tcctccctca cagggtcag ggctcagggc tcaagtctca gaacaaatgg cagaggccag 11580  
tgagcccaga gatggtgaca gggcaatgat ccaggggcag ctgcctgaaa cgggagcagg 11640  
tgaagccaca gatgggagaa gatggttcag gaagaaaaat ccagggaatgg gcaggagagg 11700  
agaggaggac acaggctctg tggggctgca gcccaggatg ggactaagtg tgaagacatc 11760  
tcagcaggtg aggccaggtc ccatgaacag agaagcagct cccacctccc ctgatgcacg 11820  
gacacacaga gtgtgtggtg ctgtgcccc agagtcgggc tctctgttc tggteccag 11880  
ggagtgagaa gtgaggttga cttgtccctg ctctctctg ctacccaac attcaccttc 11940

FIG.4G



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tcctcatgcc cctctctctc aaatatgatt tggatctatg tccccgccc aatctcatgt 12000  
caaattgtaa accccaatgt tggaggtggg gccttgtgag aagtgattgg ataatgcggg 12060  
tggattttct gctttgatgc tgtttctgtg atagagatct cacatgatct ggttgtttaa 12120  
aagtgtgtag cacctctccc ctctctctct ctctctctta ctcatgctct gccatgtaag 12180  
acgttctctgt ttccccctca ccgtccagaa tgattgtaag tttctgagg cctccccagg 12240  
agcagaagcc actatgcttc ctgtacaact gcagaatgat gagcgaatta aacctctttt 12300  
ctttataaat taccagctct caggtatttc tttatagcaa tgcgaggaca gactaataca 12360  
atcttctact cccagatccc cgcacacgct tagccccaga catcactgcc cctgggagca 12420  
tgcacagcgc agcctcctgc cgacaaaagc aaagtcacaa aaggtgacaa aaatctgcat 12480  
ttggggacat ctgattgtga aagagggagg acagtacact tgtagccaca gagactgggg 12540  
ctcaccgagc tgaaacctgg tagcactttg gcataacatg tgcattgacc gtgttcaatg 12600  
tctagagatc agtggtgagt aaaacagcct ggtctggggc cgctgctgtc cccacttccc 12660  
tcctgtccac cagagggcgg cagagttcct cccaccctgg agcctcccca ggggctgctg 12720  
acctccctca gccgggccc cagcccagca ggggtccacc tcaccgggt cacctcgcc 12780  
cacgtctctc tcgccctccg agctcctcac acggactctg tcagctctc cctgcagcct 12840  
atcgcccgcc cacctgaggc ttgtcgcccg cccacttgag gcctgtcgcc .tgccctctgc 12900  
aggcagctcc tgtcccctac acccctcct tccccgggt cagctgaaag ggcgtctccc 12960  
agggcagctc cctgtgatct ccaggacagc tcagtctctc acaggctccg acgcccccta 13020  
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gcgcctgtct cccggttaca ggaaaactct gtgacagga ccacgtctgt cctgctctct 13140  
gtggaatccc agggcccagc ccagtgcctg acacggaaca gatgctccat aaatactggt 13200  
taaattgtgtg ggagatctct aaaaagaagc atatcacctc cgtgtggccc ccagcagtca 13260  
gagtctgttc catgtggaca caggggcact ggcaccagca tgggaggagg ccagcaagtg 13320  
cccgcggctg cccaggaat gaggcctcaa ccccagagc ttcagaaggg aggacagagg 13380  
cctgcaggga atagatcctc cggcctgacc ctgcagccta atccagagtt cagggtcagc 13440  
tcacaccagc tcgacctgg tcagcatccc tagggcagtt ccagacaagg ccggaggtct 13500  
cctcttgccc tccagggggg gacattgcac acagacatca ctcaggaaac ggattcccct 13560  
ggacaggaac ctggctttgc taaggaagtg gaggtggagc ctggtttcca tcccttgctc 13620

FIG.4H



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caacagaccc	ttctgatctc	tcccacatac	ctgctctgtt	cctttctggg	tcctatgagg	13680
accctgttct	gccaggggtc	cctgtgcaac	tccagactcc	ctcctggtac	caccatgggg	13740
aaggtggggg	gatcacagga	cagtcagcct	cgcagagaca	gagaccaccc	aggactgtca	13800
gggagaacat	ggacaggccc	tgagccgcag	ctcagccaac	agacacggag	agggaggggtc	13860
cccctggagc	cttccccaag	gacagcagag	cccagagtca	cccacctccc	tccaccacag	13920
tcctctcttt	ccaggacaca	caagacacct	ccccctccac	atgcaggatc	tggggactcc	13980
tgagacctct	gggcctgggt	ctccatccct	gggtcagtgg	cggggttggt	ggtactggag	14040
acagaggggt	ggtccctccc	cagccaccac	ccagtgagcc	tttttctagc	ccccagagcc	14100
acctctgtca	ccttcctgtt	gggcatcatc	ccaccttccc	agagccctgg	agagcatggg	14160
gagaccggg	accctgctgg	gtttctctgt	cacaaaggaa	aataatcccc	ctgggtgtgac	14220
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aaaaagagga	gggacaaaag	aggcagaaat	gagaggggag	gggacagagg	acacctgaat	14400
aaagaccaca	cccatgaccc	acgtgatgct	gagaagtact	cctgccctag	gaagagactc	14460
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ctgtgagacg	gacagagggc	tcctgttgga	gcctgaatag	ggaagaggac	atcagagagg	14760
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caagagttct	attttcctag	ttaattgtca	ctggccacta	cgtttttaaa	aatcataata	14880
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cgctaccgc	ggacattgga	aaataagccc	caggctgtgg	agggccctgg	gaacctcat	15000
gaactcatcc	acaggaatct	gcagcctgtc	ccaggcactg	gggtgcaacc	aagatc	15056

FIG.4I



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gaattcagaa ataggggaag gttgaggaag gacactgaac tcaaagggga tacagtgatt 60  
ggtttatttg tcttctcttc acaacattgg tgctggagga attcccaccc tgaggttatg 120  
aagatgtctg aacacccaac acatagcact ggagatatga gctcgacaag agtttctcag 180  
ccacagagat tcacagccta gggcaggagg aactgtacg ccaggcagaa tgacatggga 240  
attgcgctca cgattggctt gaagaagcaa ggactgtggg aggtgggctt tgtagtaaca 300  
agagggcagg gtgaactctg attcccatgg gggaatgtga tggctctgtt acaaattttt 360  
caagctggca gggaataaaa cccattacgg tgaggacctg tggagggcgg ctgccccaac 420  
tgataaagga aatagccagg tgggggcctt tcccatgtga ggggggacat atctggcaat 480  
agaagccttt gagacccttt agggtaacaag tactgaggca gcaaataaaa tgaaatctta 540  
tttttcaact ttatactgca tgggtgtgaa gatataattg tttctgtaca gggggtgagg 600  
gaaaggaggg gaggaggaaa gttcctgcag gtctggtttg gtcttgtgat ccaggggggtc 660  
ttggaactat ttaaattaaa ttaaattaaa acaagcgact gttttaaatt aaattaaatt 720  
aaattaaatt ttactttatt ttatcttaag ttctgggcta catgtgcagg acgtgcagct 780  
ttgttacata ggtaaacgtg tgccatgggtg gtttgcgtga cctatcaacc catcacctag 840  
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caacaggccc cagtgtgtgt tgttcccctc cctgtgtcca tgtgttctca ttgttcagct 960  
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ggttgcatag aaattgtttt tacaaatcca attgatattg tatttaatta caagttaatc 1140  
taattagcat actagaagag attacagaag atattaggtg cattgaatga ggaaatatat 1200  
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aaggattcat accgtgccat tgaagaggaa gatggaaaag ccaagaagcc agatgaaagt 1560  
tagaaatatt attggcaaag cttaaattgtt aaaagtccta gagagaaaagg atggcagaaa 1620  
tattggcggg aaagaatgca gaacctagaa tataaattca tcccaacagt ttggtagtgt 1680

FIG.5A





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gcagctgtag ccttttctag ataatacaact attgtcatac atcgcttaag cgagtgtaaa 1740  
atggtctcct cactttatatt atttatatat ttatttagtt ttgagatgga gcctcgctct 1800  
gtctcctagg ctggagtgca atagtgcgat accactcaact gcaacctctg cctcctctgt 1860  
tcaagtgatt ttcttacctc agcctcccca gtagctggga ttacaggtgc gtgccaccac 1920  
acccggctaa tttttgtatt tttttagag acggggtttt gccatgttgg ccaggctggt 1980  
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ggcatgagcc accgtgccca accactttat ttatttttta tttttatttt taaatttcag 2100  
cttctatttg aaatacaggg ggcacatata taggattggt acatgggtat attgaactca 2160  
ggtagtgatc atactacca acaggtagggt tttcaacca ctccccctct tttcctcccc 2220  
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agctccacc tgtaagtga aacgtgtggt atttgatttt ctgtccctgt gttaatccac 2340  
ttaggattat ggcttcagc tccattcata ttgctgtaaa ggatatgatt catttttcat 2400  
ggccatgcag tattccatat tgcgtataga tcacattttc tttctttttt ttttttgaga 2460  
cggagtcttg ctttgctgcc taggctggag tgcagtagca cgatctcggc tcaactgcaag 2520  
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caaagtgctg ggattacagg ggtgagccac tgcgcccggc ccatatatac cacattttct 2760  
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aacagtatat aagcattccc tttctccac agctttgtca tcatggtttt ttttttctt 3060  
tattttaaaa aagaatatgt tgttgttttc ccagggtaca tgtgcaggat gtgcagggtt 3120  
gttacatagg tagtaaactg gagccatggt ggtttgctgc acctgtcaac ccattacctg 3180  
ggtatgaagc cctgcctgca ttagctcttt tccctaagtc tctcactact gccccacct 3240  
caccctgaca gggcaaacag acaacctaca gaatgggagg aaatttttgc aatctattca 3300  
tctgacaaaag gtcaagaata tccagaatct acaagggaact taagcaaatt tttacttttt 3360

FIG.5B



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aataatagcc actctgactg gcgtgaaatg gtatctcatt gtgggttttca tttgaatttc 3420  
tctgatgatc agtgacgatg agcatttttt catatttggt ggctgcttgt acgtcttttg 3480  
agaagtgtct cttcatgcct tttggccact ttaatgggat tattttttgc tttttagttt 3540  
aagttcctta tagattctgg atattagact tcttattgga tgcatagttt gtgaatactc 3600  
tcttccattc tgtaggttgt ctgtttactc tattgatggc ttcttttgct gtgccgaagc 3660  
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ttgtatatgt gaaaggtcta ctctcatttt ctttccctct ttctttcttt ctttcttttc 3900  
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tgccaggtc gcagtgcagc ggcacgatct cggctcactg caacctctgc ctctgggtt 4080  
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cccgactaat ttttgatttt ttagtagaga cgggggttgt ccatgttggc caggctgggt 4200  
tgaaactcct gacctcaaac gatctgcctg ccttggcctc ccaaagtgt gggattacag 4260  
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tttataaaag ctccagctaa gctaccttaa aaggggcctg tatggctgat cactcttctt 4500  
gctatacttt acacaaataa acaggccaaa tataatgagg ccaaaattta ttttgcaaat 4560  
aaattgggtc tgctatgatt tactcttggg aagaacaggg aaaatagaga aaaatttaga 4620  
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aaaactgaag ccatggtatt ctgaggacta gagatgactc aacagagctg gtgaatctcc 4920  
tcatatgcaa tccactgggc tcgatctgct tcaaattgct gatgcaactg tgctaaagct 4980  
atacatttaa aacctcact aaaggatcag ggaccatcat ggaagaggag gaaacatgaa 5040  
attgtaagag ccagattcgg ggggtagagt gtggaggtca gagcaactcc accttgaata 5100

FIG.5C



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agaaggtaaa gcaacctatc ctgaaagcta acctgccatg gtggcttctg attaacctct 5160  
gttctaggaa gactgacagt ttgggtctgt gtcattgccc aaatctcatg ttaaattgta 5220  
atccccagtg ttcggaggtg ggacttggtg gtaggtgatt cggtcatggg agtagatttt 5280  
cttcttttggtg gtgttacagt gatagtgagt gagttctctg gagatctggt catttaaaaag 5340  
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gctttgcctt ctaccataag taaaagcccc ctgaggcctc ccagaagca gatgccacca 5460  
tgcttctgt acagcctgca gaaccatcag ccaattaaac ctcttttctg tataaattac 5520  
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gggtcaaaca ccttgatggc atcgtacttc aattgtctta cacattcctt ctgaatgact 5700  
cctccccat ggcatataag ccctgggtct tgggggataa tggcagaggg gtccaccatc 5760  
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ttggggtagg ttgcacaacc ctgcccacca cgaaacaaat gtttaatatg ataaatatgg 5940  
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aaatgtgtcc aaagatggaa aatgtttgag aactactgtc ccagagattt tctgagttc 6060  
tagagtgtgg gaatatagaa cctggagctt ggcttcttca gcctagaatc aggagtatgg 6120  
ggctgaagtc tgaagcttgg cttcagcagt ttggggttgg ctccggagc acatatttga 6180  
catgttgca ctgtgatttg gggtttggtt tttgctctga atcctaattg ctgtccttga 6240  
ggcatctaga atctgaaatc tgtggtcaga attctattat cttgagttagg acatctccag 6300  
tcttggttct gccttctagg gctggagtct gtagtcagt acccggtctg gcatttcaac 6360  
ttcatataca gtgggtatc ttttggtcca tgtttcaacc aaacaaccga ataaaccatt 6420  
agaaccttcc cccacttccc tagctgcaat gttaaacctt ggatttctgt ttaatagggt 6480  
catatgaata atttcagcct gatccaaact tacattcctt ctaccgttat tctacacca 6540  
ccttaaaaat gcattcccaa tatattcctt ggattctacc tatatatggt aatcctgggt 6600  
ttgccagttt ctagtgcatt aacataacct atttacattc ttttacttta aagtggaaat 6660  
aagagtcctt ctgcagagt caggagttct caagatggcc cttacttctg acatcaattg 6720  
agatttcaag ggagtcgcca agatcatcct caggttcagt gattgctggt agccctcata 6780

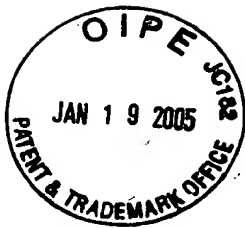
FIG.5D



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taactcaatg aaagctgtta tgctcatggc tatggtttat tacagcaaaa gaatagagat 6840  
gaaaatctag caagggaaga gttgcatggg gcaaagacaa ggagagctcc aagtgcagag 6900  
attcctgttg ttttctccca gtgggtgcat ggaaagcagt atcttctcca tacaatgatg 6960  
tgtgataata ttcagtgtat tgccaatcag ggaactcaac tgagccttga ttatattgga 7020  
gcttggttgc acagacatgt cgaccacctt catggctgaa ctttagtact tagccctcc 7080  
agacgtctac agctgatagg ctgtaacca acattgtcac cataaatcac attgttagac 7140  
tatccagtgt ggcccaagct cccgtgtaaa cacaggcact ctaaacaggc aggatatttc 7200  
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agaatccttt accgcacact ctccttcaca gggttattgt gaggatcaaa tgttggtcatg 7320  
tgtgtgagac accagcacat gtctggctgt ggagagtgc ttctatgtgt gctaacattg 7380  
ctgagtgcta agaaagtatt aggcattggc ttcagcactc acagatgctc atctaactct 7440  
cacaacatgg ctacagggtg ggcactacta gcctcatttg acagaggaaa ggactgtgga 7500  
taagaagggg gtgaccaata ggtcagagtc attctggatg caaggggctc cagaggacca 7560  
tgattagaca ttgtctgcag agaaattatg gctggatgtc tctgccccgg aaagggggat 7620  
gcactttcct tgacccctta tctcagatct tgactttgag gttatctcag acttcctcta 7680  
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cactcttccc agctccatct ccagctggcc aggtgtagcc acagtaccta actctttgca 7800  
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cattttaccg acttgcaaac acataagcta acctgccagt tttgtgctgg tagaactcat 7920  
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ggtccagaaa agaaaacggt attattgcct ttgctcagaa gacacacaga aacataagag 8400  
aaccatggaa aattgtctcc caacactgtt caccagagc cttccactct tgtctgcagg 8460  
acagtcttaa catcccatca ttagtgtgtc taccacatct ggcttcaccg tgcccaacca 8520

FIG.5E



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agatttctag gtccagttec ccaccatgtt tggcagtgcc ccactgccaa cccagaata 8580  
agggagtgct cagaattccg aggggacatg ggtggggatc agaacttctg ggcttgagtg 8640  
cagagggggc ccatactcct tggttccgaa ggaggaagag gctggagggtg aatgtccttg 8700  
gaggggagga atgtgggttc tgaactctta aatccccaag ggaggagact ggtaagggtcc 8760  
cagcttccga ggtactgacg tgggaatggc ctgagagggtc taagaatccc gtatcctcgg 8820  
gaaggagggg ctgaaattgt gaggggttga gttgcagggg tttgttagct tgagactcct 8880  
tgggtgggtcc ctgggaagca aggactggaa ccattggctc cagggttttg tgtgaaggta 8940  
atgggatctc ctgattctca aagggtcaga ggactgagag ttgcccatgc lttgatcttt 9000  
ccatctactc cttactccac ttgagggtaa tcacctactc ttctagttcc acaagagtgc 9060  
gcctgcgcga gtataatctg cacatgtgcc atgtcccagag gcctggggca tcatccactc 9120  
atcattcagc atctgcgcta tgcgggcgag gccggcgcca tgacgtcatg tagctgcgac 9180  
tatccctgca gcgcgcctct cccgtcacgt cccaaccatg gagctgtgga cgtgcgtccc 9240  
ctggtggatg tggcctgcgt ggtgccaggc cggggcctgg tgtccgataa agatcctaga 9300  
accacaggaa accaggactg aaagggtgcta gagaatggcc atatgtcgct gtccatgaaa 9360  
tctcaaggac ttctgggtgg agggcacagg agcctgaact tacgggtttg cccagtgcca 9420  
ctgtcctccc aagtgagtct cccagatacg aggcaactgt ccagcatcag cttcatctgt 9480  
accacatctt gtaacaggga ctaccagga ccctgatgaa caccatggtg tgtgcaggaa 9540  
gaggggggtga aggcattggac tcctgtgtgg tcagagccca gagggggcca tgacgggtgg 9600  
ggaggaggct gtggactggc tcgagaagtg ggatgtggtt gtgtttgatt tcctttggcc 9660  
agataaagtg ctggatatag cattgaaaac ggagtatgaa gaccagttag aatggagggt 9720  
caggttgag ttgagttaca gatggggtaa aattctgctt cggatgagtt tggggattgg 9780  
caatctaaag gtggtttggg atggcatggc tttgggatgg aaataggttt gtttttatgt 9840  
tggctgggaa ggggtgtggg attgaattgg ggatgaagta ggtttagttt tggagataga 9900  
atacatggag ctggctattg catgcgagga tgtgcattag tttggtttga tctttaaata 9960  
aaggaggcta ttagggttgt cttgaattag attaatgtgt gttgggttga tgggttgggc 10020  
ttgtgggtga tgtggttga ttgggtctgt ttaaattggt ttgggtcagg ttttggttga 10080  
ggttatcatg gggatgagga tatgcttggg acatggaltc aggtggttct cattcaagct 10140  
gaggcaaatt tcctttcaga cggtcattcc agggaacgag tggttgtgtg ggggaaatca 10200

FIG.5F



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ggccactggc tgtgaatata cctctatact ggtcttgaat tgtgattata tatgtccatt 10260  
ctgtctcctt cactgtactt ggaattgata tggtcattca gctggaaatg ggggaagatt 10320  
ttgtcaaatt cttgagacac agctgggtct ggatcagcgt aagccttcct tctggtttta 10380  
ttgaacagat gaaatcacat tttttttt aaatcacag aaatcttata gagttaacag 10440  
tggactctta taataagagt taacaccagg actcttattc ttgattcttt tctgagacac 10500  
caaatgaga tttctcaatg ccacctaat tctttttttt tttttttttt tttttgagac 10560  
acagtctggg tcttttgctc tgtcactcag gctggagcgc agtgggtgtga tcatagctca 10620  
ctgaaccctt gacctcctgg acttaaggga tctcctgct tcagcctcct gagtagatgg 10680  
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aagggtctca ctttgttgcc ctggctgata ttgaacttct gacttcaagt gattcttcag 10800  
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ccagactgat ctagtatgtg tggaacagca agtgcgtggct ctcctctccc ttccacagct 11880  
ctgggtgtgg gaggggggtg tccagcctcc agcagcatgg ggagggcctt ggtcagcatc 11940

FIG.5G



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taggtgcaa cagggcaagg ggggggtcct ggagaatgaa ggctttatag ggctcctcag 12000  
ggaggccccc cagccccaaa ctgcaccacc tggccgtgga caccggt 12047

FIG.5H



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cgagcgggccc ctcagcttcg gcgcccagcc ccgcaaggct cccggtgacc actagagggc 60  
gggaggagct cctggccagt ggtggagagt ggcaaggaag gaccctaggg ttcacgag 120  
cccaggttta ctcccttaag tggaaatttc ttccccact cctccttggc tttctccaag 180  
gaggggaaccc aggctgctgg aaagtccggc tggggcgggg actgtgggtt caggggagaa 240  
cggggtgtgg aacgggacag ggagcgggta gaagggtggg gctattccgg gaagtgggtg 300  
ggggagggag cccaaaacta gcacctagtc cactcattat ccagccctct tatttctcgg 360  
ccgctctgct tcagtggacc cggggagggc ggggaagtgg agtgggagac ctaggggtgg 420  
gcttcccgac cttgctgtac aggacctga cctagctggc ttgttcccc atccccacgt 480  
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ccccctcccc cggagccagg gagtgggttg tgaaaggggg aggccagctg gagaacaaac 600  
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gaggaggaag aggtaggagg taggggaggg ggcgggggtt tgtcacctgt cacctgctcg 720  
ctgtgcctag ggcgggcggg cggggagtgg ggggaccggt ataaagcggg aggcgcctgt 780  
gcccgtcca cctctcaagc agccagcgcc tgctgaatc tgttctgccc cctccccacc 840  
catttcacca ccaccatg 858

FIG.6





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aagcttccac aagtgcattt agcctctcca gtattgctga tgaatccaca gttcagggtc 60  
aatggcggtc aaaacttgat caaaaatgac cagactttat attcttacac caacatctat 120  
ctgattggag gaatggataa tagtcatcat gtttaaacad ctaccattcc agttaagaaa 180  
atatgatagc atcttggtct tagtcttttt cttaataggg acataaagcc cacaaataaa 240  
aatatgcctg aagaatggga caggcattgg gcattgtcca tgcctagtaa agtactccaa 300  
gaacctatct gtataactaga tgacacaatg tcaatgtctg tgtacaactg ccaactggga 360  
tgcaagacac tgcccatgcc aatcatcctg aaaagcagct ataaaaagca ggaagctact 420  
ctgcaccttg tcagtgaggt ccagatacct acag 454

FIG.7



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g atg acc ggc tca acc atc gcg ccc aca acg gac tat cgc aac acc act	49
Met Thr Gly Ser Thr Ile Ala Pro Thr Thr Asp Tyr Arg Asn Thr Thr	
1 5 10 15	
gct acc gga cta aca tct gcc cta aat tta ccc caa gtt cat gcc ttt	97
Ala Thr Gly Leu Thr Ser Ala Leu Asn Leu Pro Gln Val His Ala Phe	
20 25 30	
gtc aat gac tgg gcg agc ttg gac atg tgg tgg ttt tcc ata gcg ctt	145
Val Asn Asp Trp Ala Ser Leu Asp Met Trp Trp Phe Ser Ile Ala Leu	
35 40 45	
atg ttt gtt tgc ctt att att atg tgg ctt att tgt tgc cta aag cgc	193
Met Phe Val Cys Leu Ile Ile Met Trp Leu Ile Cys Cys Leu Lys Arg	
50 55 60	
aga cgc gcc aga ccc ccc atc tat agg cct atc att gtg ctg aac cca	241
Arg Arg Ala Arg Pro Pro Ile Tyr Arg Pro Ile Ile Val Leu Asn Pro	
65 70 75 80	
cac aat gaa aaa att cat aga ttg gac ggt ctg aaa cca tgt tct ctt	289
His Asn Glu Lys Ile His Arg Leu Asp Gly Leu Lys Pro Cys Ser Leu	
85 90 95	
ctt tta cag tat gat taa	307
Leu Leu Gln Tyr Asp	
100	

FIG.8